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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/046,300 | 01/16/2002 | Syuuji Matsuura | 0033-0785P | 2317 |

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| EXAMINER | |
|---|---|
| LAMBRECHT, CHRISTOPHER M | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 2611 | 4 |

DATE MAILED: 11/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/046,300 | MATSUURA, SYUUJI | |
| | Examiner | Art Unit | |
| | Christopher M. Lambrecht | 2611 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-7 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 16 January 2002 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

1. The examiner acknowledges applicant's co-pending applications (09/981,625, 09/556,099, 09/782,257) in the letter received 3/14/02.

### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claim 2 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The current invention is a cable modem tuner comprising a receiver section in which a downstream signal is input to an up-converter where it is subjected to frequency conversion, to produce an intermediate frequency, selected to be of higher frequency than the received signal (pg. 9, lines 18-29).

The specification fails to adequately describe "up-converter for converting said down signal to a first intermediate frequency signal of lower frequency" as recited in claim 2, lines 4-5.

The claimed lower frequency contradicts the disclosed higher frequency.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999).

The term "up converter" in claim 2 is used by the claim to mean "for converting...to a first intermediate frequency signal of lower frequency (pg. 13, lines 4-5)", while the accepted meaning is "a device for performing frequency translation in such a manner that the output frequencies are higher than the input frequencies (Newton, 843)." The term is indefinite because the specification does not clearly redefine the term.

### *Claim Rejections - 35 USC § 102*

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 1 & 7 are rejected under 35 U.S.C. 102(e) as being anticipated by Abe (Abe et al., US 20020056134A1).

With regard to claim 1, Abe discloses a cable modem tuner comprising an upstream circuit (200, pg. 4, ¶48) for transmitting a data signal to a CATV station (pg. 4, ¶48, lines 5-7), wherein said upstream circuit includes a gain controllable gain control circuit receiving said data signal (page 5, ¶69), a power amplifying circuit having gain controlled by said gain control circuit (502, page 5, ¶69), and a control circuit for controlling said transmission/interruption of said data signal (206, page 4, ¶53).

With regard to claim 7, Abe discloses a cable modem tuner including upstream circuit (200, pg. 4, ¶48) for transmitting a data signal to a CATV station and a receiving a down signal from said CATV station (pg. 4, ¶48, lines 5-7), comprising: a duplexer (201 & 101, pg. 4, ¶53, lines 16-17) for branching the data signal to said CATV station and the down signal from said CATV station; a return pass circuit (206, pg. 4, ¶53) outputting said data signal to said duplexer; and a receiving unit receiving the down signal branched by said duplexer (100, pg. 4, ¶48).

8. Claim 2 is rejected under 35 U.S.C. 102(e) as being anticipated by Vorenkamp (Vorenkamp et al., US 20020007151A1).

In view of the 35 U.S.C. 112 1st and 2nd paragraph rejections, the examiner has interpreted the claim to read consistently with the specification, i.e., the term "lower frequency (pg. 13, line 5)" has been substituted with "higher frequency."

With regard to claim 2, Vorenkamp discloses a cable modem tuner comprising a receiving unit for receiving a down signal from a CATV station (pg. 34, ¶404), wherein said receiving unit includes an up-converter (506, 514, FIRST LO) for converting said down signal to

a first intermediate frequency signal of higher frequency (pg. 7, ¶118), a filter for selecting the first intermediate frequency signal output from said up converter (BPF located between 514 & 516 in the signal path, fig. 19), and a down converter (516, 508, SECOND LO, 518, BPF located immediately after 518 in signal path, fig. 5) converting the first intermediate frequency signal selected by said filter to a second intermediate frequency signal of lower frequency for output (pg. 7, ¶118).

With regard to claim 4, Vorenkamp discloses said down converter includes a first intermediate frequency amplifying circuit (516, ¶121) amplifying the first intermediate frequency signal selected by said filter, a local oscillation circuit (SECOND LO, fig. 5) outputting a local oscillation signal having lower frequency than said first intermediate frequency signal (pg. 7, ¶118), a mixer circuit (508, ¶118) mixing the first intermediate frequency signal with said local oscillator signal and outputting a second intermediate frequency signal, a second intermediate frequency amplifying circuit (518, ¶121) amplifying the second intermediate frequency signal output from said mixer circuit, and a filter (BPF located immediate after 518 in the signal path, fig. 5) for selecting said second intermediate frequency signal output from said second intermediate frequency amplifying circuit.

With regard to claim 5, Vorenkamp discloses the variable gain amplifying circuit (5432, pg. 33, ¶393) receiving the second intermediate frequency signal from said second intermediate amplifying circuit (where fig. 54 is an embodiment of the disclosed receiver, ¶390).

***Claim Rejections - 35 USC § 103***

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claim 3 rejected under 35 U.S.C. 103(a) as being unpatentable over Vorenkamp in view of Tzuang (Tzuang et al., US005930696A).

Vorenkamp discloses a cable modem tuner according to claim 2 (See ¶7, above), wherein said up converter includes a local oscillator outputting a signal having higher frequency than said down signal, and a mixer circuit for mixing the down signal with the local oscillator signal. Vorenkamp does not disclose said up converter comprises a broadband high frequency amplifying circuit for amplifying said down signal and a broadband variable gain amplifying circuit receiving the down signal from said broadband high frequency amplifying circuit.

Tzuang discloses a broadband high frequency amplifying circuit (1) for amplifying said down signal, and a broadband variable gain amplifying circuit (4) receiving the down signal from said broadband high frequency amplifying circuit (col. 5 line 65 – col. 6, line 5), for the advantage of achieving low noise and low distortion characteristics (col. 9, lines 50-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Vorenkamp to include a broadband high frequency amplifying circuit and a broadband variable gain amplifying circuit receiving the down signal from said broadband high frequency amplifying circuit, as taught by Tzuang, for the advantage f achieving low noise and low distortion characteristics.

11. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Vorenkamp in view of Carmi (US5705966A).

Vorenkamp discloses a cable modem tuner according to claim 2 (See ¶7, above) wherein said filter includes a bandpass filter. Vorenkamp does not disclose said bandpass filter is formed of an oscillation circuit including a strip line, a print coil, or an air coil.

Carmi discloses a filter formed of an oscillation circuit including a strip line, for the advantage of high accuracy and repeatability in construction (col. 1, lines 39-50).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Vorenkamp to include a filter formed of an oscillation circuit including a strip line, as taught by Carmi, for the advantage of high accuracy and repeatability in construction.

***Conclusion***

12. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

## Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

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Typed or printed name of person signing this certificate:

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Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Lambrecht whose telephone number is (703) 305-8710. The examiner can normally be reached from 8:30 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the primary examiner, Christopher Grant can be reached on (703) 305-4755. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Christopher M. Lambrecht
Examiner
Art Unit 2611

CML

CHRIS GRANT
PRIMARY EXAMINER